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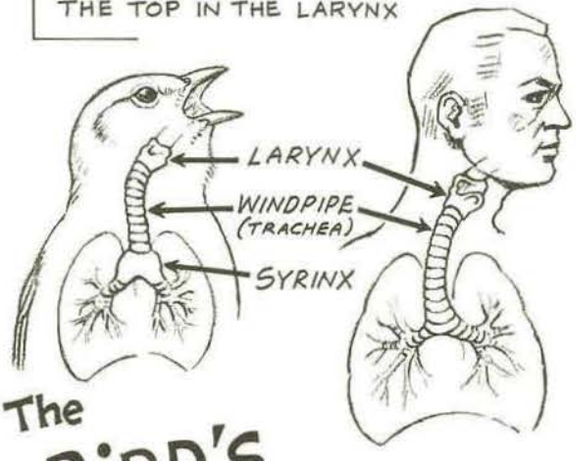
Florida Wildlife Scrapbook

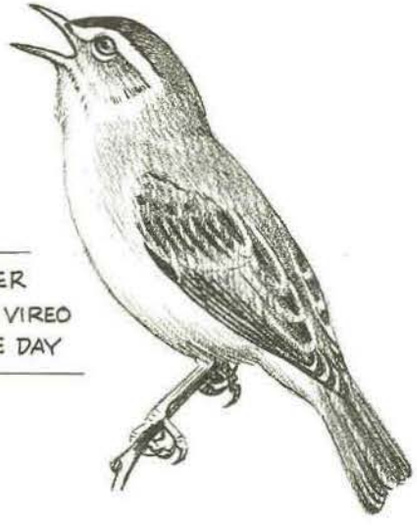
THE VOICE OF THE BIRD COMES FROM THE SYRINX LOCATED AT THE BOTTOM OF THE WINDPIPE • HUMAN VOCAL CORDS ARE AT THE TOP IN THE LARYNX



The BIRD'S VOICE

BIRDS SPEND A LOT OF TIME SINGING – ESPECIALLY DURING THE SPRING AND SUMMER SEASONS WHEN ESTABLISHING TERRITORIES AND DURING THE NESTING PERIOD

DURING ONE DAY'S TIME A SONG SPARROW WAS HEARD SINGING FOR NINE HOURS



ONE CAREFUL BIRD WATCHER REPORTED THAT A RED-EYED VIREO SANG 22,197 TIMES IN ONE DAY

THE MOCKINGBIRD IS GENERALLY REGARDED –

AS THE CHAMPION SINGER AMONG BIRDS

IN ADDITION TO ITS OWN SONG IT IS A TALENTED MIMIC • ONE MOCKER, DURING A DAY OF SONG, REPORTEDLY IMITATED THE VOICES OF 55 OTHER BIRD SPECIES

AVERAGE FREQUENCY OR PITCH OF BIRD SONGS IS ABOUT 4300 CYCLES PER SECOND (CPS) – SLIGHTLY HIGHER THAN THE HIGHEST NOTE ON THE PIANO

THE ROBIN'S PITCH RANGES FROM 2200 TO 3300 CPS • THE SONG SPARROW'S 1900 TO 7700 CPS • THE BLACKPOLL WARBLER'S 8000 TO 10,225 • RANGE OF A HUMAN SOPRANO IS 250 TO 850 CPS

FLORIDA WILDLIFE SCRAPBOOK • FLORIDA GAME AND FRESH WATER FISH COMMISSION

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The Cover

You may call him "redbelly" or "river bream," but the Redbreast Sunfish is a springtime Florida favorite by any name. A 1-pounder is a big one. Small though it is, not a sweeter-tasting fish is likely to be found. See page 32.

From A Painting By Wallace Hughes

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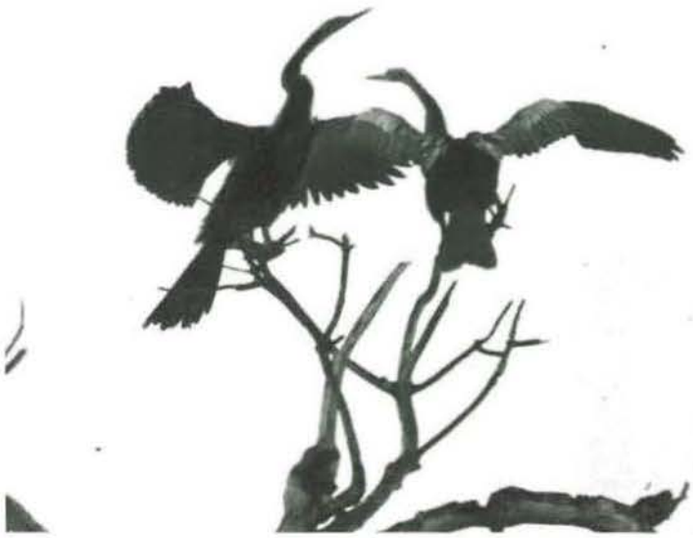
in springtime nature's children
turn to thoughts of love

HOW ABOUT A KISS—IS ANYBODY LOOKING?

Anhinga Romance

Photographs By
ELIZABETH T. ADLER

Text By Morrie Naggiar



NOBODY OVER THERE . . . .

NOBODY THERE EITHER!

SMACK!

BY MOST STANDARDS, it would be stretching a point to call the anhinga a pretty bird; interesting, perhaps, but certainly not a thing of beauty.

The dress-up word, anhinga, is the South American name for the species. In the lingo of the native Floridian, it is more likely to be referred to as water turkey or snakebird. Both monikers are based on conspicuous features; the long, barred tail feathers remind one of a turkey's fan and the long slender outline of head and neck does appear rather snake-like.

Fishing is the water turkey's forte and most of its diet consists of fish of one kind or another. Now and again some other small aquatic creature may end up on the anhinga's menu. Variety means such items as the larvae of caddis flies, or perhaps a few crayfish or small frogs.

Sitting with wings outspread to the sun is a typical stance of this bird while resting after an active feeding session or following a cool night on the roost.

So whether or not you consider the water turkey a decorative addition to the landscape, it's an integral part of outdoor Florida. ●

THE CHAIRMAN COMMENTS . . .

By O. M. PHIPPS, Chairman

FOR CLOSE TO THIRTY YEARS, Florida Wildlife Officers with the Game and Fresh Water Fish Commission calmly devoted 60 and more hours weekly to the dedicated task of protecting the wildlife and fresh water aquatic life in this state.

A few of these officers (and many of their wives) had unkind words concerning long hours and busy nights spent knee-deep in swamp water searching for the battery operated headlight of a fire hunter or watching a set of illegal nets in hopes of apprehending the culprit as he sought his ill-planned gains.

It was perfectly normal for the trunk of a wildlife officer's vehicle to contain a week's supply of rations, pots and pans, coffee pot, and bedroll, in the anticipation of camping out in the woods for days at a time in hopes of making yet another arrest of a game law violator.

And, as the song goes, "Along came Jones. . . ." In this case, it was the Federal government who came along and advised these hard-working lawmen they would henceforth toil at their appointed tasks for no more than 40 hours each week.

"It can't be done in 40 hours" and "We're being put in a position where the outlaw element will have us over a barrel" were only a few of the comments printable when the word was first passed to the men in the field.

And, of course, the reorganization, the scheduling, the shifting of personnel, the rapid expansion of the law enforcement division to fill in the gaps, and the problems inherent in such a wrenching of assignments slowly began to smooth out. The men in the field rose to the challenge with the net result of the forced 40-hour week being an actual increase of effectiveness.

Part of the credit for the improvement came with the simultaneous installation of the long-awaited 24-hour radio communications network, providing instant contact between the man 20 miles into the bush on an airboat and the senior duty officer who could add a back-up unit or advise other law enforcement personnel of the possible need for cooperative endeavors.

A stepped-up training program, coordinated with the Florida Police Standards Commission, increased the knowledge of the men sent into the field where the experience and talents of the old-line officer blended to make game law violating a much more hazardous activity.

In keeping with the national trend, law enforcement salaries were on a rising curve, thus permitting the Commission to draw from a more highly educated, more elite recruit force.

Compared to the "game warden" of 30 or even 10 years past, the Commission Wildlife Officer today is a professional in the purest sense of the word, with training and ability showing clearly as he goes about his myriad duties.

Florida can be proud of its wildlife protectors, not only the professional biologists in the game and fish management fields but especially in the professional law enforcement division of the Game and Fresh Water Fish Commission. ●

Luring Bluegills

long a worm dunker's delight, the feisty bluegill offers much to the lure caster—and in a compact package

By CHARLES WATERMAN

SINCE THEY LIVE ALMOST ANYWHERE it's wet, I am not sure of the exact requirements for good bluegill populations. There are Florida waters where they're scarce but big, some where they're plentiful but small, and some where they're thoroughly mixed.

Although our southern bluegills run to a hefty average under ideal conditions, they don't gain the occasional extreme size of those in the North, and nobody has satisfactorily explained that to me. The Florida models can be caught by any means used on northern ones, and in most parts of the state they can be caught on tackle that's a lot of fun. If you like artificials, you should be able to keep the freezer full without ever digging a worm or scrounging for grubs.

This is not the natural history of bluegills and their ilk; just some things I've found out about catching them.

Big bluegills like the ones shown below are routine in Florida but real behemoths are lacking for some reason.

One thing that holds up a lot of bluegill fishermen is the bedding business. Since they're apt to be concentrated then, it's easy to get the idea that it's the only time to fish for them. Of course, the gimmick about a bream bed is that once you get them located, you can put out the anchor and stay for a spell. When they aren't bedding, you may have to do some moving. They do a little spawning all year long, but spring's the big deal.

The artificials I've found most consistent (and with some apprehension I'm going to list them in the order of effectiveness for me) are: small woolly worms or nymphs, tiny spinner combinations, rubber spiders or other leggy bugs that barely float, small popping bugs, and little jigs.

There are times when any one of these lures will catch more bluegills than the rest, but if you don't have them all available you just aren't trying hard enough. And although you could work all of them but the jigs on a fly rod if you insisted, casting a spinner on one is a nuisance. I'd much rather have a very light spinning rod for that. About 4-pound line should be all right. Two-pound line will hold a bluegill, but it won't hold much of a stump, and spinners are expensive.

You can catch plenty of bluegills on ordinary dry flies as used for freshwater trout, but they're pretty likely to be swallowed, and when a runt bluegill swallows something, you'll have to wheel him into surgery. They get the wet flies into their goozles badly enough. Not much trouble with the popping bugs, but it can happen. A hungry bluegill is hungry all over.

In warm weather, late evening is almost invariably the best time for bluegills on the surface. There's a rule that the little ones stay in the shallows all day long and that the big ones move out there just before dusk, living most of the time in deeper places. However, last January we caught some very big bluegills in pretty shallow water along some shorelines in midday, using little spinner combinations and wet nymphs. If the weather's warm there's nothing wrong with bluegill fishing in the winter in mid-Florida.

Nearly all tomes on panfishing keep stressing very slow speed for retrieves, and I'll go along

(*Continued on next page*)

(*Continued from preceding page*)
with it most of the time. But when they're taking spinner combinations in shallow water, there are times when fairly fast reeling will get more fish, simply because it covers more water.

I believe in pretty careful tuning of spinners so they'll turn easily and might make a little sparkle on the way down if you let them sink.

In my experience, bluegills don't like to change depths too much. When the surface fishing is hot, it's generally over fairly shallow water or the fish are suspended near the surface looking for something on top. How shallow is shallow? Well, I don't think they're anxious to come up more than two or three feet. Yes, I'm sure that, like bass, they'll sometimes come up much farther, but I wouldn't count on it if I were starving. Just how far they will come from a weedbed or a stump is something else. I've watched them paddle 10 or 15 feet for a popping bug, but I don't know about sunken things. Unless the water's very clear they might not notice them that far away and, generally speaking, an underwater lure is more likely than a popping bug to move away from the intended victim.

I have picked up more bass on popping bugs than with any of the other standard bluegill lures, and there are some places where I use a bug that's of an in-between size and will take only the bigger bluegills but is large enough to get special attention from bass. There's a routine for operation of a bug like that. At first, you just let it lie on top and twitch it very gently with bluegills in mind. If you don't get any customers that way, you pop it loudly just before you pick it up. This last move will send the local bluegills under something but might bring a bass that isn't interested in gently-nudged doodads. What do you have to lose?

Most of the time you'll catch a lot more fish when working a shoreline if you keep your boat very close in. If you're using spinning tackle, that keeps you from wasting much of every retrieve over poor water, and it helps your accuracy. If your spinning lure is less than 1/16 ounce, you won't have much range anyway. If you're using a fly rod, you may have to stay out a little more to make the rod work, but you don't work a fly clear to the boat. If one fisherman is using a fly and the other a spinning outfit, there'll have to be a compromise.

Ordinarily, I'd say you can approach bluegills more closely than you can bass without scaring them, but when you're fishing within 25 or 30 feet of the shore, you'll need to be reasonably quiet. If it's shallow, even a little electric motor can queer the program when used carelessly.

I HAVE BEEN USING A REAL owl roaster called a "Q-Beam Sport Lite." This thing costs something less than $30, and I see it advertised by Eckerd Drugs. It plugs into a cigaret lighter on a boat or car. Instead of mounting it on a boat, you just hold it by a handle and point it toward anything you want to blind. Works on your 12-volt battery and they claim it will light up things about a mile away.

Big searchlight keeps small boaters off the bank at night.

Whether you use that one or not (I didn't mean to sound like a salesman), a powerful light is a big help in any boat that's used after dark. Once I get the running lights working I find they don't exactly boost my night vision, and few boatmen I've known can do a very good job on a moonless night unless they keep an eye on a compass.

Before I got this plug-in light, I used a big dry cell lantern with no problems, although I could have used a little more power. Somebody swiped it.

Those navigators who are good at running rivers or lake shorelines at night have told me they go by the tops of trees on shore. Of course, the prob-

lem is the scheme of shadows and reflections over water. I am the guy who ran 20 miles on a dark night in the Everglades country, fished in a place I didn't recognize, and came home without knowing where I'd been. I take pride only in the fact that I got back.

Black dark can affect anybody's thinking if he isn't used to it. A while back I was running an outboard boat, going maybe 20 miles an hour in a marked channel with plenty of lights. Just as I came to a bend marked by an intermittent light, something burned out and it went off. Too stupid to realize it wasn't coming on again, I danged nearly ran into the shoreline waiting for it.

I DON'T KNOW THE WHYS OF THE enormous popularity of the spinner bait. Not that it doesn't catch fish well enough, but where has it been all these years? I see that the Umco people have brought out a "spinner bait box" that holds some 50 spinner baits at one time without tangling, and you can grab one without getting a bird nest of the whole batch. You can also buy separate "caddy units" that fit inside the spinner bait box or would work in another type if you have room enough. Kind of a set of racks that holds the lures separate.

The spinnerbait—maybe it's reached the status where it now should appear as a single word instead of two—just doesn't seem different enough from a blue jillion other such things made years ago and forgotten or ignored. There was one that I used in 1927 that would have dropped right into a pile of current ones without any attention. It wasn't the Shannon Twin Spinner, although I used that too, but I've forgotten what they called it or what became of it.

MORE AND MORE COMPLICATIONS are showing up concerning things like offshore oil rigs and strip mining. Despite the desires of both ecologists and industrialists, the picture just won't come out in a nice, crisp black and white.

Where I came from as a kid, old strip pits have provided some of the best bass fishing ever seen in that neck of the woods. That's up in southeastern Kansas. And the oil rigs off the Louisiana coast got quite an assessment from McFadden Duffy a while back. Duffy, long-time Louisiana outdoor writer, described the excellent fishing around the structures and implied that it more than offset ecology detriment.

Forgetting the possibilities of oil spills, the big offshore structures have all of the merits of any kind of artificial reef. From what I hear, I am of the opinion that such rigs not only attract their own resident colonies of fish, and concentrate the pelagic species, but I believe such a setup actually increases the number of fish in the ocean. It becomes a place for a completely new food chain to sprout.

There's no way of proving this conclusively, but I think it just has to be. I never said there aren't disadvantages in having the land gouged and the ocean drilled.

HIGH SPEED REELING IS A BIG THING these days. Some kinds of black bass fishing seeming to require it, and a lot of saltwater fishing works better if the bait goes fast. They're selling accessory units to make some conventional baitcasting reels run faster than the original quadruple takeup, and quite a number of the newer spinning reels will hurry too. Most big salt water winches don't turn four-to-one, but if the spool's big enough, they go pretty fast.

All of this is working up to an antique reel I was examining the other day, a part of an extensive collection of winders that went clear back before the Civil War. The one that got my attention was a 9-to-1 multiplier. Now that's multiplication. Even a barracuda should be happy with a lure cranked by that one, but I'd hate to use it if I had to take up line that pulled hard. Gearshift reels show up from time to time, and there's no reason why they won't work, although the extra mechanism is likely to boost the price a little.

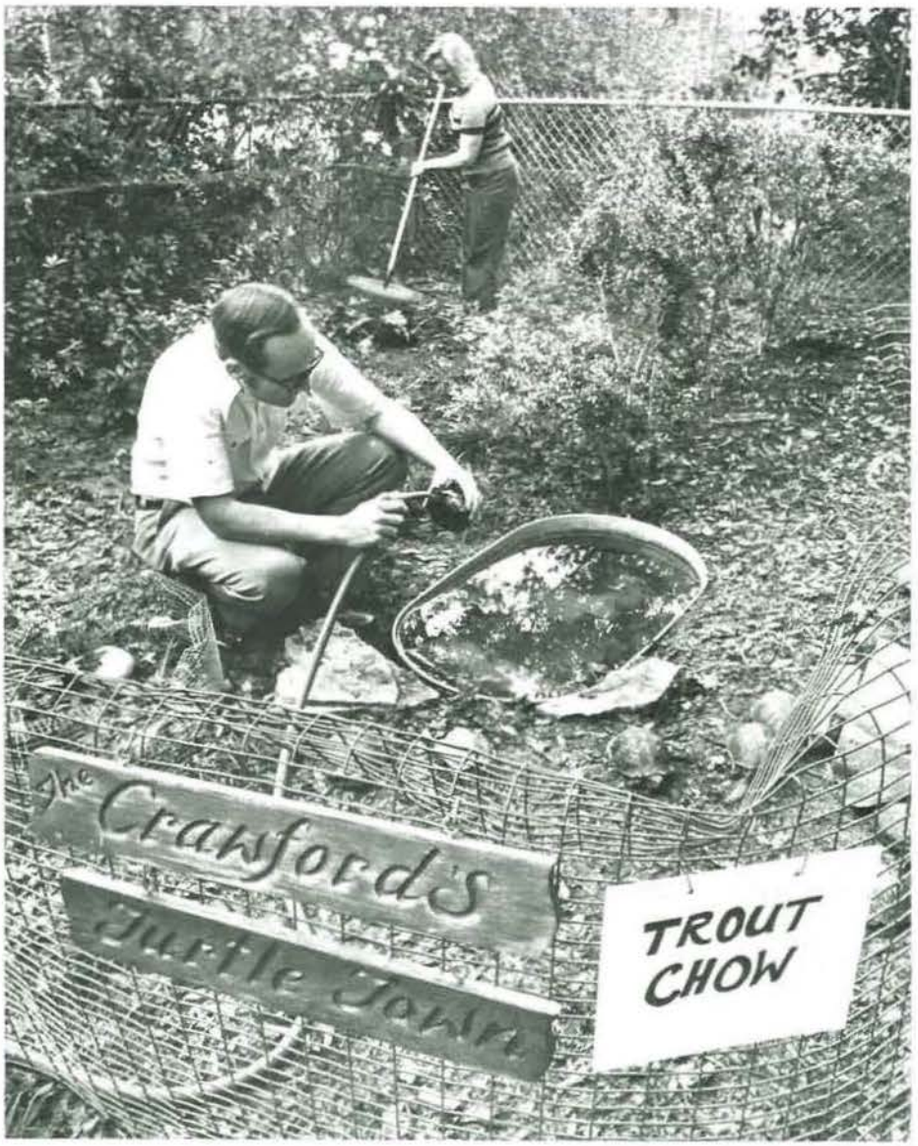
AND ON THE SUBJECT OF OLD REELS: When I was a kid, there was a big deal about quick takedown for casting reels. There were some trade names that referred to the ease with which individual models could be disassembled, and some of the very best reels came apart the easiest. If something broke down, there was no problem replacing it. Likewise, cleaning or lubrication was very simple.

Anyway, this takedown feature just simply went out of style. It's true that a layman can repair some of the current reels, but he'd better keep pretty good track of the pieces as he takes them out. Right at the moment, I'd say the Number One consideration in buying a high-quality spinning or casting reel is the availability of parts and service for it. I have three busted gems that need only small pieces which wouldn't cost very much—if I could get them.

Service is very bad. Blame it on the economy, or simply on the attitude of manufacturers if it makes you feel better. There are also too many model changes, especially in spinning reels, some of which have no visible purpose.

The wildest comment I've heard about reel repairs, but one which haunts me, was this from a friend of mine: "The reel to buy is a popular one that falls apart all the time. That way you can get parts if you need them. If you get a really good one that seldom breaks down, you're stuck if it does."

There is so much left-handed logic in that, I have nothing to say. ●



there is more than meets the eye to keeping captive reptiles healthy

Turtles, Turtles, Turtles

By SABINE EHLERS

WHEN AN ATTRACTIVE YOUNG COUPLE own 76 turtles, they must have a good reason. Chase and Marianna Crawford, of Tallahassee, have. For several years they have been doing research on the habits of turtles, their food preferences, and their social order.

Presently they are in the midst of a rather ambitious year's research on box turtles' eating habits, experimenting with various kinds of commercial foods to ascertain whether any kind of food will affect the fertility of turtles in captivity; which kind makes for better general health. They are checking body weight, muscle tone of the hind legs, condition of gums and mouth cavity, luster of the eyes, and condition of the flesh and scales on the appendages. They are also checking the turtle's excretions, shell condition, and alertness, watching to see if their turtles are languid, remaining sleepily in the sun when approached, or whether they will come toward the person who feeds them, or at least look up.

The Crawfords are using the "pre-test, post-test, control group" design, taking color photographs to detect any changes, weighing the turtles from time to time, and recording all their information. They plan to conclude the experiment at the end of a "turtle year"—from March to hibernation, which depends on when the cold weather sets in.

The results will be printed and available to the International Turtle and Tortoise Society's office in Los Angeles, California, to universities, and anyone else who may be interested.

The experiment is set up in this fashion: In each of three pens the Crawfords have placed eight Eastern box turtles (*Terrapene carolina carolina*), six Gulf Coast box turtles (*T. carolina major*), and four Florida box turtles (*T. carolina bauri*). The 18 are equally divided between male and female.

The pens are made of vinyl-coated 11-gauge wire dug into the ground in the Crawford's back yard. The wire is turned inward at the top so the turtles can't climb out.

The watering and feeding conditions are similar, even to using the same kind and color food dish in each pen. In pen A, they have placed Ralston Purina Chuck Wagon Dog Chow; in pen B, Ralston Purina Experimental Marine Chow; and in C, for

the control group, the Ralston Purina Trout Chow which they have been using.

Last winter, while the turtles were hibernating, dug in cozily into the wood chips and bark in their old pen, Crawford built the three new enclosures. Then one warm day in March the turtles crawled sleepily into the sun, and the experiment was ready to begin. The Crawfords marked the turtles' shells, notching them in a special way they had learned when they visited the London Zoo in 1970.

The results of the study should be helpful to zoos and anyone who is feeding large numbers of turtles and needs an inexpensive, convenient, and nourishing food for the reptiles. (The Crawfords explain that they will feed their special pets who are not in the experiment delicacies like strawberries and shrimp in addition to their regular food.)

In answer to why the experiment, Chase Crawford explains, "We were feeding our turtles on table scraps, melons, and bananas, and observed that they did better on one thing or another. Then one day while I was visiting the National Zoo, in Washington, D.C., Lee Schmeltz, curator of reptiles and amphibians, told me that he had started feeding his zoo collection Ralston Purina Trout Chow. It was more convenient, he said, and provided a balanced diet.

"When I returned home, I tried to buy some trout chow but couldn't find any, so I wrote the company for their chow and asked if they had anything better to suggest. A phone call from their research department asked if I would be willing to experiment with some of the food they considered appropriate. I agreed and they first sent me a list of the foods and the chemical analysis for each.

Photos By Mark Foley

"I made a large chart listing all the chows and their nutritional contents. After analyzing them, I selected three I thought would work best. First, I tried the Trout Chow, which I am using for the control group and which has seemed to please our turtles. For the experiment I have added the other two."

Why are the Crawfords so interested in experimenting in this fashion? Partly, Chase says, because they are a couple of "turtle nuts," partly because knowledge about turtles is slight and they would like to add to it, and also because he is certain that the right diet would keep the turtles healthy and prevent disease.

Crawford, in his early 30's, was born and raised in Lima, Ohio. He is employed by the Florida Department of Education in the Bureau of Research and Information, and is a specialist in financial analysis, a far cry from turtles. But he has come a long way from his sophomore year in high school, when he first became interested in turtles as pets and began studying their habits, personalities, and social order.

Five years ago Chase married Marianna Protsman, of Live Oak, Florida. She soon became fascinated with the reptiles and joined her husband in studying them.

Although Mrs. Crawford is a busy person—she's a design consultant, with design and home economics education—she doesn't neglect the turtles. "Chase calls me the turtles' mother," she said smiling.

"We've observed many interesting things about turtles," says Crawford. "For one thing, they know the people who feed and care for them. They like to have their chins chucked, just as dogs and cats like to be petted or stroked.

"They have differing personalities. We know those we've had for a long time. Incidentally, we mark our turtles because, believe it or not, there are turtlenappers, mostly kids who want pets. They take them, but when we lose one, we tell all the kids in the neighborhood, and somehow they find the turtle and bring it back," Crawford laughed.

According to Crawford, the social order of turtles in captivity is like that of some birds and mammals. The males have a dominant role. One male becomes the head, or king, and likewise there is one dominant female. There is a pecking order as well among two or three other males, who fight for some sleeping areas, for the females with whom

(*Continued on next page*)

Farm chores at Turtle Town, opposite page. Marianna rakes leaves while Chase washes turtle just out of hibernation. Chase, left, gives one of his many charges a closer look.

(*Continued from preceding page*)
they wish to mate, and for food. Then there is the mass of turtles who seem to do as they are told. At any rate, they don't stand out in the group.

Turtles live a long time, depending on the kind of turtle. Ten to twelve years is a short span. Box turtles have been known to live 80 to 100 years.

For aspiring herpetologists Crawford recommends Peter C. H. Pritchard's book LIVING TURTLES OF THE WORLD. Dr. Pritchard, an Englishman and an authority on turtles, wrote the book (published in 1967) while studying for his doctorate at the University of Florida under the world famous herpetologist, Dr. Archie Carr.

Pritchard's book discusses the evolution of turtles, their families and classifications (with detailed descriptions for each species and race), breeding habits, and turtles in captivity.

For the benefit of budding turtle fanciers in North America, the following classifications may be of interest.

The most common and numerous turtles in North America are the box turtles, genus *Terrapene,* with twelve species. Two of the best known in the United States are *T. carolina* and *T. ornata.* The box turtle has four races: *T. carolina, T. c. major, T. c. bauri,* and *T. c. triunguis.*

T. carolina carolina is recognizable by the yellow blotches on its carapace (top shell) and skin; *T. bauri* has yellow radiating lines on its blue-black carapace; *T. major's* carapace is almost black, and *T. triunguis* has a brown carapace and usually has three toes.

T. carolina lives mostly on land, preferring wooded places, although occasionally they are found in water. They eat meat and vegetation, are small—never more than 7 inches in length—and their distinctive characteristic is their hinged plastron (bottom shell), which closes so tightly that even the point of a knife cannot penetrate.

T. ornata is found in the central United States, and lives in sandy areas. It has a flatter shell than the *carolina,* and its carapace is decorated with a pattern of light-colored lines.

Turtles have been with us since before the age of the dinosaurs. Their evolution is an extremely interesting study in itself.

Pritchard writes: "Why they (turtles) have survived so long in spite of extinction of other reptile groups is a mystery. Perhaps it is because they made a complete and radical change in structure when they evolved into turtles and have concentrated on defense rather than attack. . . . It is interesting to note that those species that have incomplete armor are invariably active, aggressive forms (snapping turtles, softshells, etc.) and that all specialized turtle types have less armor . . . than the unspecialized types."

Among the many other facts in Pritchard's book, how the turtle has been regarded in ancient civilizations and the present is of special interest.

In ancient Egypt, the turtle was thought to be sacred. The Greeks went one better. They claimed that even their gods considered them sacred. And in Asia in this century, the turtle is claimed to have a religious significance. There is a special Tortoise Temple in Bangkok, Thailand, to which fresh water turtles are brought by worshippers who believe the reptiles are saving their lives. Burmese Buddhists adorn the top shell of the batagur, a large freshwater turtle, with gold leaf before releasing it in a great religious ceremony.

According to Pritchard, "The ten-mile stretch of the Sipra River that passes through Avantika, India, is inhabitated by literally thousands of large-headed river turtles. For two thousand years Buddhist and Hindu worshippers have fed and cared for these turtles, which have completely lost their fear of man."

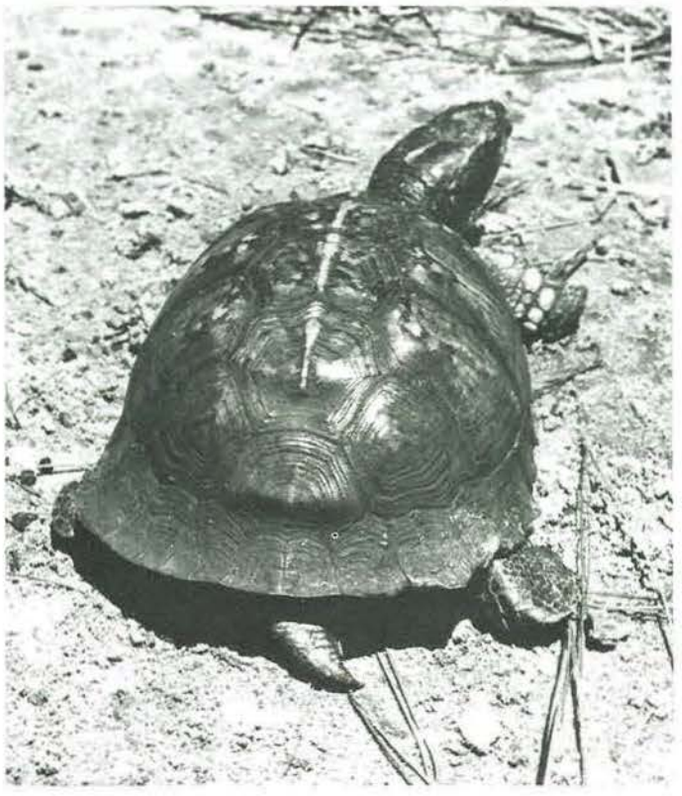
As for the United States, who hasn't heard the fables of the tortoise and the hare, the tortoise and the eagle?

But fables are one thing; the turtle as a pet is of greater consideration, as thousands of people, especially children, attempt to raise them.

For a word from those who know, we turn to the Crawfords. Chase and Marianna Crawford claim that box turtles make the best of turtle pets.

Gulf Coast box turtle, below, shows the sparse, light carapace markings which are typical of this form. The Florida box turtle, right, shows the "straight-down" rear margin of carapace, contrasting with the "flared-out" rear margin of Gulf Coast form. Latter specimen is unusually distinctly patterned for this subspecies.

Photo By Wallace Hughes



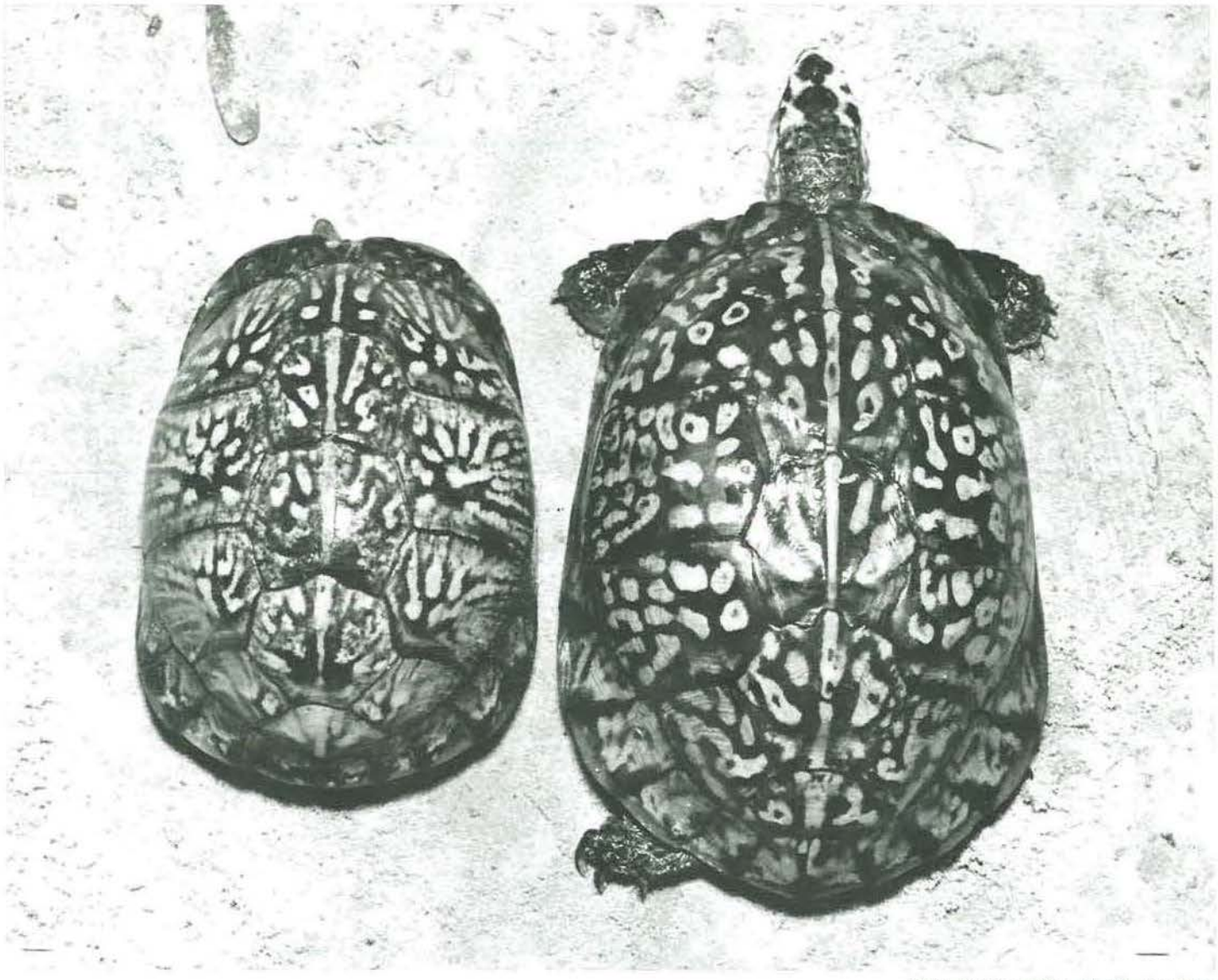


Photo By Ross Allen Reptile Institute

They are easy to raise and keep healthy if properly fed and kept clean. They may be kept outdoors in the summer if the temperature is between 75 and 85 degrees. They may even remain out-of-doors in the winter provided they have been hearty eaters during the summer, for they need enough stored fat to keep them alive during their hibernation. Of course, the pens should have adequate hibernation material—wood chips, loose soil, and leaves—to enable the turtles to dig themselves in.

For most pet owners, an indoor terrarium is preferable—kept away from drafts, in the sun or with an artificial light with a 60 watt bulb about 9 inches from the basking rock. Turtles need to be kept warm, as they are cold-blooded animals and won't eat if they get too cold.

Sunlight is beneficial to turtles. It dries the shell and skin, reducing the chances of fungal infection, and kills attached leeches and parasites. But too much sun is dangerous. The Crawfords warn, "Be careful not to stew or bake the turtle; they like to bask, not to bake."

Before actually finding that pet turtle, the Crawfords suggest reading an elementary book about their habits and their care. The one they like best is TURTLES AND THEIR CARE, by John Hoke, published by Franklin Watts, New York, New York.

After reading the book, the best way to find a good healthy box turtle in the Panhandle area of Florida is to look around the yard. Likely as not, there will be a turtle or two crawling around. One often finds them that way, or better still, try the woods. There they are in plentiful supply.

The Crawfords and Dr. Marshall D. Fox, of the Center for Disease Control, in Atlanta, do not recommend buying a turtle from a pet shop, because of the danger of getting one infected with salmonella bacteria, which can infect the person handling the turtle. Children are especially susceptible.

Although the National Turtle Farmers and Shippers Association has a program of educating individual turtle farmers on the importance of sanitary conditions to prevent salmonella-infected turtles from getting into the pet shops, some farmers still keep their turtles in stagnant water and feed them dead fish and spoiled garbage scraps. As a result, the babies are infected when shipped, and some-

(*Continued on next page*)

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times the shipping conditions are far from sanitary if not downright dangerous to the health of the baby turtles.

According to Dr. Fox, there is no assurance that any one turtle raised on a turtle farm will be free of salmonella. To be absolutely certain, the turtle would have to be killed and its internal organs inspected. He claims that any turtle from a turtle farm is suspect. "Whenever turtles are mass produced in a small area like a pond, the water will become stagnant and there will be environmental infection.

"Although there is a law regulating the interstate shipment of turtles, saying that they must be tested in approved laboratories by bacteriological techniques, only a small sample is tested.

"It has been known also that some ponds have been treated with antibiotics for a few days, which leaves the turtles free of salmonella just long enough to pass the test.

"Presently, the federal government is considering two proposals: either that the test be more stringent or that interstate shipment of turtles be banned," said Dr. Fox.

The Disease Control Center prefers the latter. Therefore, finding healthy mature turtles in the woods, or out-of-doors in other places like one's yard, is the best bet.

From an interest in turtles as pets, it's a short step to interest in the turtle's role in ecology.

For example, the Crawfords cited the snappers. "They are called nature's garbage grinders. Anything on that bottom that's dead they'll eat, even sick fish, even spoiled fish.

"Box and other land turtles eat cockroaches, caterpillars, and slugs. Box turtles are the best for flower and vegetable gardens," says Mrs. Crawford.

Is working and playing with turtles to be a lifetime interest of the Crawfords?

"At this point, we think so," said young Crawford. "They're fascinating and delightful pets." ●

Inhabitants of Crawford's Turtle Town range in size down to the tiny one—smaller than a quarter—being displayed below by Marianna. The Crawfords are conducting research on the eating habits, food preferences, and other matters pertaining to their charges. Three types of box turtles are currently included in the study: the Eastern box turtle, Gulf Coast box turtle and the Florida box turtle.

Photo By Mark Foley

IN MEMORIAM

KNOWING BILL HANSEN, he wouldn't have wanted this, but the staff of FLORIDA WILDLIFE feels that he gave too much of himself to this magazine and its readers for us to let his passing go without a brief article about his contributions. Bill gave to the magazine, to the field of outdoor journalism, to the Game and Fresh Water Fish Commission, to his country, and to those of us who were privileged to know and work with him. He was editor from 1954 to 1974.

Bill died February 2, 1975, at age 53, following an amazing 6-year-battle with brain cancer. Illness had forced his retirement from Commission employment a little over a year ago (See FW, May '74, page 6).

During his long struggle, Bill never gave in to his illness, nor did he ever give associates the impression that he was the least bit sorry for himself. On the contrary, he maintained his well-known sense of humor throughout his ordeal. Actually, he lifted our spirits more often than we lifted his, try as we did to share a small part of his burden. He had a wisecrack or a clever one-liner handy most of the time, or a small practical joke, or at least a smile and a word of encouragement or praise even on his bad days. That's the way he was. Bill Hansen was a positive thinker and a *doer*. He immersed himself in his work, sometimes too much for his own good. But at least he had no time for sadness, self-pity or depression.

He was fond of recalling that he took the job as magazine editor only on a temporary basis but that his "temporary" appointment kept getting longer. And that's the way it happened. Then-Commission Director C. W. Pace made Bill acting editor in March 1954 (he had been associate editor for several months), and he held the position continuously for 20 of FLORIDA WILDLIFE'S 28-year existence.

During those years, Bill was active in both the Florida Outdoor Writers Association and the Outdoor Writers Association of America, and at the time of his Commission employment he was a free-lance photographer and publisher of his own successful outdoor tabloid, THE GULF COAST SPORTSMAN.

Bill brought to the Commission's Publications Section (editing FLORIDA WILDLIFE was only a part of his duties) a high degree of skill and extensive technical knowledge of the publishing and printing business. His oft-stated personal objective was "to produce the best quality publications at the lowest possible cost to the Commission." He never sacrificed time or effort to achieve that objective. A shoddy printing job was unthinkable to him, yet in maintaining quality he used his knowledge to reduce production costs wherever possible. He succeeded admirably at his work, and was recognized by fellow professionals many times, but he preferred to keep his award plaques stacked neatly in an office cabinet, where they remain.

Although he was unable to be present, the Florida Wildlife Federation honored Bill in September 1974 by presenting to him their Conservation Communicator Award in recognition of outstanding contributions to conservation education through the printed media. It was well-deserved recognition that privately pleased Bill. That award trophy occupies a prominent spot in the Hansen home on Lake Bradford, in Tallahassee.

Bill was a native Long Islander, but he left New York at the age of 19 when he entered the U.S. Navy. He was stationed at Pensacola when World War II began. Later, Bill was ordered to the West Coast and combat duty in the Pacific, where he was an air crewman engaged in aerial photography and mapping of the islands in preparation for invasion. He was honorably discharged in August 1946 with the rank of Chief Photographers Mate but remained a member of the Naval Reserve for 20 years—8 in New York immediately after the war, and 12 in the Tallahassee unit after Bill and his lovely wife, Penny, made their home here.

Besides Penny, Bill is survived by his retired parents, Mr. and Mrs. William F. Hansen, Sr., also of Tallahassee. Burial was at Santa Rosa Cemetery in south Walton County, not far from the Gulf of Mexico. Bill loved west Florida—Santa Rosa Beach and the Choctawhatchee Bay country. It was Penny's home, and they were married while he was stationed at Pensacola, in 1944. For years, that area had been his favorite retreat from the pressures and problems of work. He fished there with his father-in-law, Toby Penner, and relaxed with other family members and friends.

The little shaded cemetery beside the sea is a fitting resting place for our buddy, Bill. ●

Photo By Wallace Hughes

with planning, your homesite can attract a variety of wildlings

Suburban Wildlife

ALDO LEOPOLD, THE FATHER OF wildlife management, once explained that there are those in life who can live without wild creatures around them, and said, "I'm one of the fortunate ones who cannot." Many suburbanites, with their small parcels of land, feel they must leave the beauty and joy of wildlife in parks and forests. Such is not the case, because with a minimal investment of time and energy, your backyard, be it 10 feet by 10 feet or ten acres, can become the habitat for many interesting wildlife species.

Habitat is the key to successful wildlife management regardless of where that management effort occurs. Few Floridians would care to share their backyard with a black bear or even a white-tailed deer, but with a little management and an eye for attracting wildlife, many kinds of birds, small mammals, amphibians, and reptiles can be invited to share your homesite. Habitat is literally the place where an animal makes a habit of being. Habitats can be very narrow strips of land or water for some restricted animal species like the Pine Barrens Tree Frog, or extensive areas for wide-ranging creatures like the Florida Panther.

Wildlife, like any other life, requires four basic components to survive: food, water, cover for protection, and areas where creatures can have their young. Combinations of these four ingredients are different for different species, but you can plan a habitat that offers enough combinations to attract the greatest number and variety of wildlife your backyard can support. To provide the maximum number of homes for wild creatures, you should work with, not against, the soil, climate, water, and native vegetation. Simply leaving a patch of unmowed lawn along one edge of your yard will enhance your neighborhood wildlife population.

Remember how much fun building bird boxes was? Well it still is, and the birds need them now more than before. Our modern forest management techniques require foresters to eliminate "wolf" trees that provide homes for many hole-nesting birds and mammals. Even-aged forestry practices essentially eliminate habitat for many woodpeckers that require mature or even dying trees to practice their unique forms of woodcarving. And as go the woodpeckers, so go a large number of hole-nesting birds like the bluebird, the tufted titmouse, and the crested flycatcher. Bird houses erected in your backyard aid them in their endless fight to survive, and you get the added bonus of watching fascinating courtship activities and the birds' energetic pursuit of insects. Bird houses need not be elaborate or fancy, but should be dry and out of

the direct sun for most of the day. Here are some measurements you might find useful:

Species	Entrance Diameter	Depth	Width × Length	Ht. From Ground
House Wren	1″	6″	4×4	6-10 ft.
Bluebird	1½″	6″	5×5	5-6 ft.
Flycatcher	2″	8″	6×6	10-15 ft.

Remember, these are just suggested dimensions. Your library can provide you with more specific information on how to build bird houses, including a condominium for purple martins. Be creative and build one. Don't be upset if a screech owl takes over your flycatcher house, or if a flying squirrel decides your bluebird box suits his needs. Managing your suburban wildlife population is guaranteed to bring you rewarding surprises.

By DAVID LAHART

Photo By Mike Fogarty

Photo By David LaHart

Don't forget a bird feeder. In terms of the number and variety of feathered creatures attracted, a well-stocked bird feeder is high on the list. Try to keep a variety of seeds available in your feeder year round.

Be consistent. Commercial bird seed is fine, but don't ignore the possibilities for growing some of your own. Planting a few handfuls of commercial seed in a corner of your garden might help keep bothersome birds away from those prized vegetables. Sunflowers are likable to gardener and bird alike. They are very nutritious, easy to grow and make a pleasant addition to any garden.

Any seed-producing grass will attract flocks of seed-eating birds. The "wheatgrasses" (*Agropyron* spp.) are unusually successful in most parts of Florida, and if some of the sorghums, millet, and rye species are added, you've provided a real banquet.

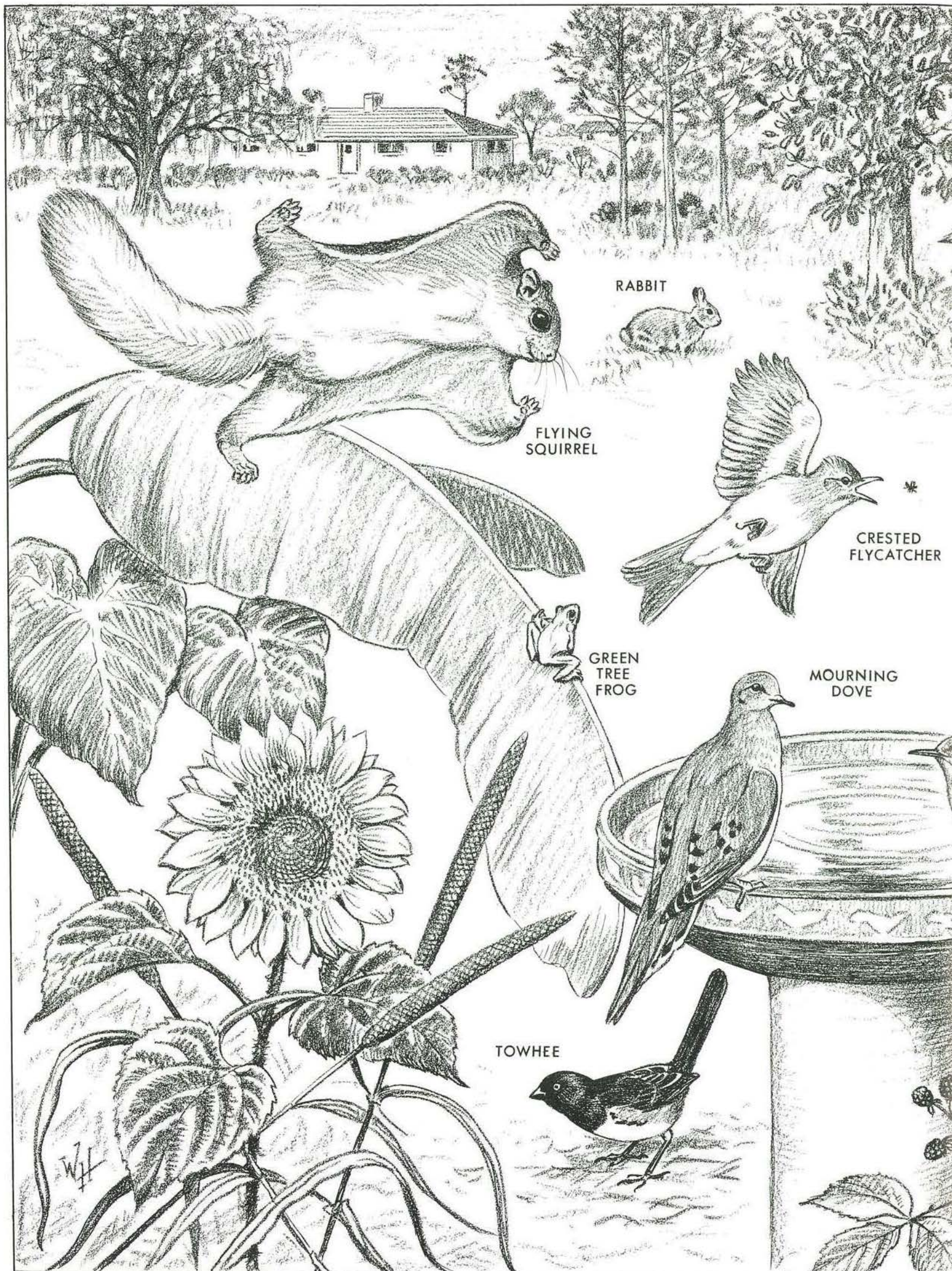
Shrubs provide both food and cover for a variety of wildlife and are a must for habitat improvements. The dogwoods and viburnums provide important foods to birds, since about 90 different species eat their berries. If you can only plant one shrub, make it one of the beautiful olives that are native to most of Florida. Fringetree (*Chionathus virginicus*) produces a fragrant flower and then dark

(*Continued on page 18*)

A shortage of natural nesting sites makes bird houses attractive to many species, including the crested flycatcher, opposite page. The screech owl, above, is familiar to many suburbanites, by sound if not by sight. Tree frog, at left, inhabits city yards. Wide-leaved plants protect these interesting and useful creatures.

Drawing By Wallace Hughes

SUBURBAN WILDLIFE



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purple fruits that are relished by wildlife. Another native species of olive is devilwood (*Osmanthus americanus*), which is similar to fringetree but less common. Add variety whenever possible, and remember that a sizable number of flowering shrubs like holly (*Ilex*) retain their foliage during the winter, providing wildlife with the added bonus of cover. Check with a reputable nurseryman or your agricultural extension agent and find out which native species are most suitable to your special needs.

Remember, native plants are adapted to live in Florida with its nutrient-poor soils, cyclic water supply, and hosts of insect pests. When properly transplanted, these plants have excellent chances for survival. They require less care and less energy input (fertilizers and pesticides) than most exotic, or introduced, species.

Water is seldom a factor that limits Florida wildlife populations. However, water in your backyard will certainly enhance your opportunities of seeing a variety of wildlife visitors.

Perhaps the simplest way you can help fulfill wildlife's critical water needs—for drinking and bathing—is with a simple bird bath or ground watering device. Most desirable, however, is a small pool with an area large enough to support aquatic plants. Pools with recirculating water can provide both a focal point in your landscape design and a watering and bathing place for wildlife. Migrating warblers seem especially attracted to such areas.

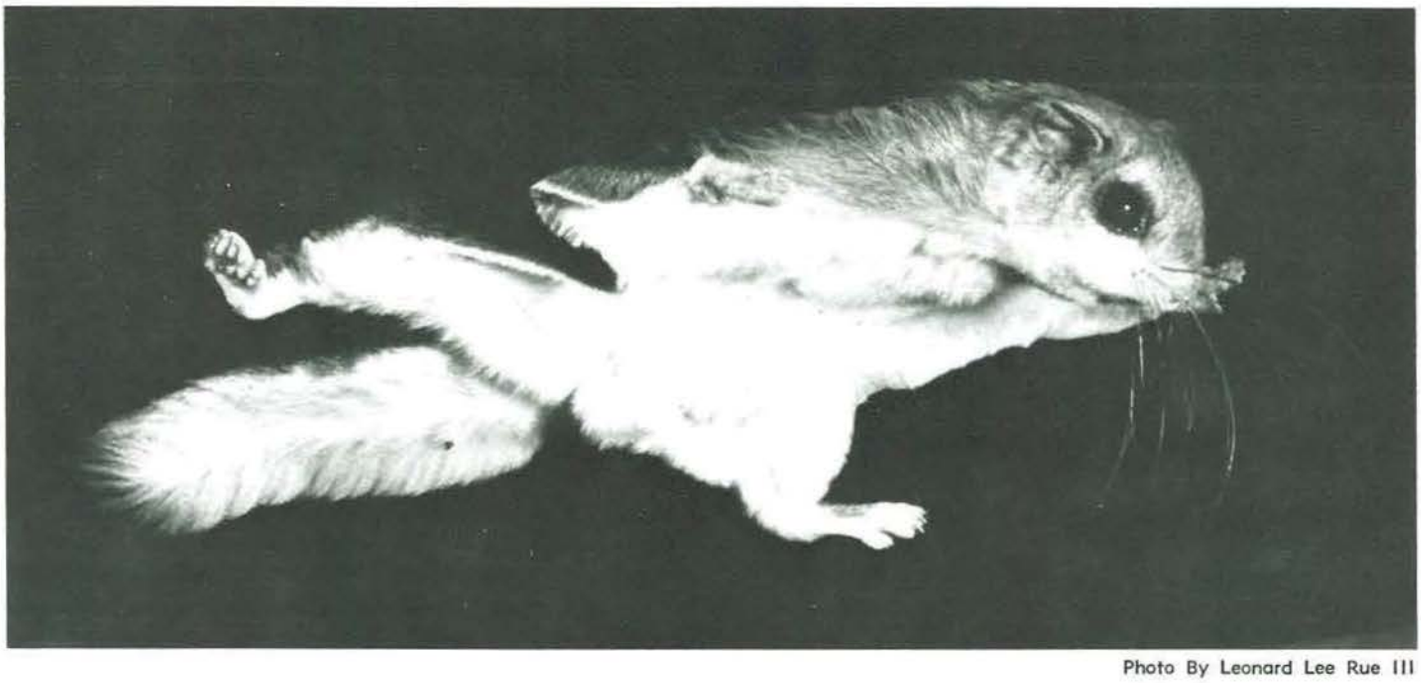


Photo By Leonard Lee Rue III

Photo By Wallace Hughes

Regular source of sunflower seeds is attractive to flying squirrels, above. Bird bath being used by a myrtle warbler, left, is a good wildlife attractor. A red-bellied woodpecker, right above, checks the offering at a feeder in a suburban yard. A valued ally in fighting insect pests is the preying mantis, at right.

Photo By Wallace Hughes

Locate them to provide maximum visibility from your terrace or house.

Very often, the kinds of trees we have in our yards were determined by the building contractor or landscaping company. Sometimes it is possible to influence their decisions, sometimes it's not. Ideally a combination of deciduous and evergreen trees will be present. If not, plant some. Starting out with a bare-bones suburban lot is a difficult task and one that is best handled by a professional. Be certain to remind him to include a diversity of tree species, including some that are quick growing (like pines) and some of the slower growing ones (like magnolia and oak), some that provide food, and others that will provide cover. Again, use native species whenever possible.

A characteristic of surburbia seems to be fences. Many psychologists believe this is an expression of territoriality in man, sociologists claim that "fences make good neighbors," and wildlife managers have learned fence rows can become good wildlife habitat. Fence rows can grow into much-needed protective, shrubby borders, and are easily maintained by trimming the tall trees that might appear. The idea is to have a thick, bush row of small trees, shrubs, vines and brambles that provide food and cover for a variety of animal life. Fence rows often become the homes for many beneficial insects like the praying mantis and ladybird beetle. Mockingbirds, cardinals and towhees may nest there. Best of all, a fence row is a habitat that animals will help plant. Fruit-eating birds will drop beneath the fence the seeds from their favorite foods, such as wild cherry, blackberries, dogwood, sumac, and mulberry. Don't mow the 3 or 4 feet adjacent to your fence for a year. You'll be surprised what will "invade" your yard. Convince your neighbor to do the same thing. You'll benefit from decreased noise, decreased air pollution, decreased energy consumption, and an increase in neighborhood wildlife.

Birds are not the only kinds of wildlife that will benefit from your management efforts. A host of small mammals like moles, rabbits, and flying squirrels will also become more obvious. Once flying squirrels learn of an easy, protected source of sunflower seeds, they become regular guests. Mammals are more active during the late evening hours, and enjoying their antics can be increased by focusing inexpensive red or blue floodlights on food plots or feeders.

Species like the green tree frog and squirrel tree frog are regular visitors to suburban windows, where they actively pursue insects. Banana plants and elephant ear plants encourage these insectivorous amphibians by providing them with cover from the drying rays of the sun. The places where the leaves attach to the stem of these plants retain moisture and make perfect hiding places for these beautiful, helpful, harmless creatures.

Suburban wildlife management is an interesting and challenging activity for both the suburbanite and the wildlife professional. If wild animals are an important part of your life, give them a chance to share your habitat. There is nothing magical about doing it; knowledge, patience, and a little work are the ingredients. If, like Leopold, you feel you can't live without wildlife, then encourage some to live with you. ●

Photo By Gene Smith

another relatively small but productive public hunting ground is the 18,000 acre

Ft. McCoy Wildlife Management Area

THE FT. MCCOY WILDLIFE MANAGEMENT AREA got its name from its location in proximity to the town of Ft. McCoy. It is a small area but a good one; small meaning it is approximately 18,000 acres in size; good meaning it supports a sustained deer harvest of 35 to 50 legal bucks a year. Squirrels are plentiful, and the turkey population is about average by statewide standards.

Deer are the most sought of the game species on the Ft. McCoy area; however, turkey, ducks, doves, quail, and squirrels are also hunted. Armadillos are not necessarily hunted, but they provide a bonus for the hunt camp cook to put on the table.

Habitat types vary widely on the area. There are pine plantations that range in age from newly planted areas to mature pines that are ready for harvest. Hardwood hammocks with cypress, live oaks, water oaks, hickory, and magnolia trees dot the area. There are several cypress ponds also.

The Oklawaha River swamp portion is made up of gum, cypress, ash, and sabal palm trees. Turkey oaks and scrub palmettos are the predominant plants on the ridges that sprawl between the ponds and flatwoods. The two main bodies of water on the management area are Gooski Prairie and McQuaig Lake.

Gooski Prairie is a shallow, bonnet-filled prairie that covers several hundred acres. Most of the prairie is outside the management area and is closed to public hunting and fishing.

McQuaig Lake is a typical flatwoods lake. Fishing is good, and the lake is also used by ducks and other waterfowl.

A map of the Ft. McCoy WMA very much resembles a jigsaw puzzle with most of the pieces missing. The hodgepodge boundaries make the area a bit difficult to hunt unless you know the area or hunt with someone who does. But the shape of the area is also advantageous, because the lands adjacent

Photo By Jim Reed

to the boundaries are owned by timber companies and individuals who either prohibit or restrict hunting on their property. This means that the management area receives overflow animals from the outside.

The area wanders from the Oklawaha River swamp to the blackjack ridges. It surrounds the community of Ft. McCoy in north Marion County, except for a portion around State Road 315 south

of the town. The river swamp portion does not touch the rest of the management area. It is set off by itself.

The lands are owned primarily by Ocala Lumber Sales Company, Hudson Pulp and Paper Company, Florida Power and Light, and the Florida Canal Authority. The Game and Fresh Water Fish Commission manages the wildlife on the area. The land is managed for timber and cattle grazing by the landowners.

When the area was first established, in 1967, the biologist in charge drew up a work plan to be executed over a period of years. Habitat manipulation and road improvement were priority items. However, Commission personnel have not been required to follow the plan; landowners and grazing lessees have been manipulating the habitat and improving the roads annually.

Approximately 500 acres of timber are harvested each year. The plots are small, and the cutover areas are ideal for deer, turkey, and quail feed. Several hundred acres are control burned each year also. Control burns open up the land so young birds can follow the parent birds without getting lost. Insects also invade burned areas and are an important ready source of food for quail and turkeys. Deer will move in to feed on young tender plants as they start to grow after the burn.

Roads in the area are such that conventional vehicles can be used on all parts of the area except under abnormal wet conditions. During wet periods, four-wheel drive vehicles are needed on some of the roads.

State Road 315 runs north and south through the town of Ft. McCoy and part of the management area. State Road 316 runs east and west through the management area and crosses 315 at Ft. McCoy. Graded roads lead off the state roads and are easy to travel. They all have names instead of numbers. Tram Road, Gator Pond Road, Gobbler Road, Hog Wallow Spur, and Cabbage Bend Road are the main grades. Unimproved roads lead out from the main roads and crisscross the area. Some of the unimproved roads will indeed test your vehicle in wet weather.

The road system is such that the hunter can

(*Continued on next page*)

By JIM REED

Photo By Jimmie McDaniel

Photo By Jim Reed

From pine plantation to cypress ponds and hardwood river swamp, a variety of habitat types are represented on Ft. McCoy Management Area. A nice deer population provides a fairly good harvest of bucks each season. A map of area shows the hodgepodge of open and closed lands that make this a confusing place for first timers to go hunting.

This is No. 10 in a series of articles on Florida Wildlife Management Areas. Maps and regulations on individual areas are available from regional offices and from the Game & Fresh Water Fish Commission, 620 S. Meridian Street, Tallahassee, Florida 32304.

Photo By Wallace Hughes

(*Continued from preceding page*)

flank his dogs and keep them within hearing distance unless the dogs leave the management area in the chase.

One campsite is open during the hunting season. It is located on the edge of Gooski Prairie just south of State Road 316 and west of the town of Ft. McCoy. It is primitive type camping. No modern conveniences are available for campers, but the few people who use the camp seem to love it. Large oaks shade most of the site, and hunters can find a place of their choice to set up camp. The campsite is not used by many hunters because most of those who hunt on Ft. McCoy are local folks or hunters who have camps nearby.

Bird watchers and nature lovers are right at home in the Ft. McCoy area. The diversified habitat attracts many species of nongame birds. Limpkins, wood ibises, egrets, herons, and bitterns are ever present around the swamps, ponds, and along the Oklawaha River.

The Game and Fresh Water Fish Commission attempts to set hunting rules and regulations for the Ft. McCoy area that are similar to the Ocala National Forest Wildlife Management Area, since the two public hunt areas are only separated by the Oklawaha River.

Rifles and hand guns are prohibited on the Ft. McCoy Wildlife Management Area, not for safety reasons, but to keep the partially steel-jacketed bullets from lodging in the pine trees and later finding their way into the pulp wood grinders, where the metal plays havoc with the grinder blades.

Archers have a hunt on the Ft. McCoy area but have not had one on the Ocala Forest for the past few years. The small game season continues on the Ft. McCoy area and a portion of the Ocala Management Area after the deer season.

No dogs are allowed on either of the two areas during the first 9 days of the deer season. However, after the first 9 days, most hunters and hunting parties use hounds to flush the deer out of the thick areas and past the hunters' stands.

One potential problem with dog hunting on the Ft. McCoy area is that they can chase a deer out of the area and into adjacent lands that are all fenced and posted. While the outside landowners probably don't want the dogs on their land, it has not caused any major problems. The landowners have been very cooperative in helping return the dogs to their owners.

Deer killed on the Ft. McCoy area are above average in size and generally have beautiful, large racks. Deer that weigh in the 150 to 200 pound class are not at all uncommon. This is attributed to the habitat manipulation that the landowners carry out.

There are no checking stations on the area; everyone is on the honor system. Wildlife officers patrol the area to check for game violations and assist the hunters, but no accurate account for deer harvest is kept. The only measure of success for the area is the hunters' enthusiasm and the landowners' willingness to keep the area open to public hunting. ●

Photo By Jim Reed

In addition to doves, seen above, turkey, quail, ducks and squirrels also come in for attention from hunters. Gooski Prairie, right, is a shallow, bonnet-filled wet prairie which provides an attraction for various kinds of wildlife. Much of the prairie is outside the management area and general public doesn't have access to it.

THE SAGA OF Old Algae Breath has finally been ended by GFC Fish Management Specialist Roger Young, of Lakeland. Young landed the giant blue tilapia, measuring 39½ inches long and tipping the scales at 24 pounds, 12 ounces, after a classic battle which raged slightly more than 5½ hours.

Young, who considers himself primarily a saltwater fisherman, hooked the fish while slow-trolling a 10-inch live carrot near the No. 2 power plant on Lake Parker on the afternoon of September 31.

When asked during a recent television interview what his sentiments were regarding the record catch, Young replied modestly, "Aw shucks, it was nothin!"—with which sentiment the staff of FLORIDA WILDLIFE heartily agrees.

As you know, photos don't lie, so this must be the biggest Florida rattler yet. Writing on the back of the photo says this 11¼-footer was bagged in 1919 by C. A. Hiscocks (2nd man from left), while hog hunting in what is now within the city limits of West Palm Beach. No precise date is given, but we're betting it was April 1.

APRIL CAPERS!

Dear Mr. Editor:

Until recently I didn't realize that we'd been catching some unusually large bass in my favorite fishing spot, Spider Lake near Ft. Webb. A mention in the local paper of a "world record" largemouth that weighed somewhat less than 25 pounds made me sit up and take notice. Shucks, boy, we turn loose them little ones like that, unless we're mighty hungry for a mess of bass steaks.

Here's a picture of a pretty good one I caught a few years back. The real trophy fish I caught last year was too big to get in a photo, even with my new Instamatic. By the time we found out we couldn't get a good picture of him, he'd expired, so we ate him.

Truthfully yours,
Orvid Clamper

Photo By Morrie Naggiar, Courtesy Woolco, Tallahassee

don't pass over lightly this all-important item of your tackle

FISH HOOKS—Plain and Fancy

HE WAS ONE OF THOSE light-blue-eyed rascals with a pencil-line mustache, a smooth olive oil beach tan, and a $30 tailored plaid shirt. I'd bet a buck he stayed up late nights reading the outdoor literature, not from deep-rooted interest but with malice aforethought—so he could lay it on us bumbling peasants who came into his shop looking for a bream hook or something equally prosaic.

He wasn't any taller than I am, but he somehow imparted the idea that he was addressing me, not talking to me, from an eminence.

"May I help you, sir?" The words were right, but the tone somehow imparted the notion that his highness considered himself confronted with a borderline moron who obviously needed plenty of assistance.

"Looking for some hooks," I muttered inanely, without glancing up. I continued rummaging through the bank of compartmented cases and muffin tins that seemed to display every kind of hook devised since man quit fishing with a Neolithic curved bone in favor of a slip of bent metal. They seemed to have every kind of hook, that is, except the one I wanted to tie up a baitfish jig.

"Exactly what kind of hook are you looking for, sir?" I ignored the question. He tried a different tack. "Perhaps if you would tell me . . ." Oh, vanity! Realization that, in the face of superior knowledge, I didn't really know the precise nomenclature of the hook I sought pushed me to the brink of a mental stampede. I saw a straw and clutched at it. At random, I jabbed my finger at a box of hooks. "Gimme a package of those," I directed with as much authority as a nervous, quivering voice could command.

I thought maybe he smirked, just faintly, mind you, when he handed me my change, but I was in too much of a hurry to leave the premises to consider it carefully at the time. But if I ever get a call to go on a fishing trip for Octavian scuttlebutz in the jungles of upper Borneo, I've got a bunch of hooks that ought to be just about right. At any

rate, they're not of too much use to me for the kind of fishing I do around my usual stomping grounds here in Florida.

The whole mess pointed up one painful fact: After puttering around with fishing gear for more than just a few years, I should have known a good bit more about fish hooks than I did. Like many other angling addicts, however, I'd dwelt at great length over decisions on lines, rods, reels, lures, and various related items and just sort of by-guess-and-by-goshed along in the hook department. This is something of an enigma, too, when you consider the fact that the hook is half of the two absolutely indispensable items required for hook and line fishing.

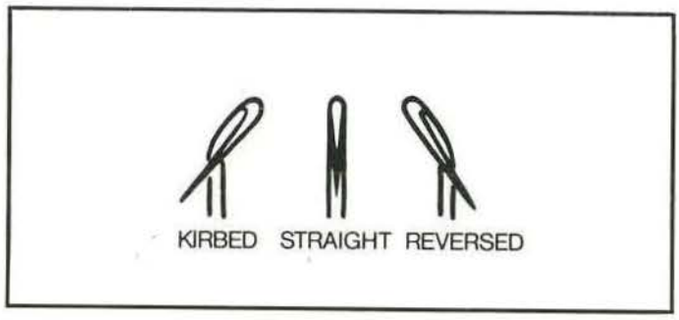
At hand I have a catalog from a prominent manufacturer of fish hooks. The scope of its coverage may be at least part of the key to the situation. Allegedly, some 60,000 hook variations are listed in this 45-page presentation. The allegee is John Wilson of the Kentucky Department of Fish and Wildlife Resources. John is listed as a writer, but I suspect he is really a statistician with sadistic anti-fisherman leanings. Why else would he rub in the fact that this one catalog alone lists 60,000 different hook possibilities. Sixty thousand! This is a devastating thought to a bumbling Waltonian who frequently ends up with his boat burdened with enough gear to keep a brisk-paced garage sale going for at least two or three days. And all because of the difficulty of deciding whether to use spinning, baitcasting, cane pole, or fly rod gear on any given jaunt.

But take heart. If you are an experienced fisherman of some years standing and have been buying hooks as most of us have by the guess-and-hope method, don't knock it. It must have worked to some degree or you wouldn't still be fishing. On the other hand, there has to be some explanation for all the variation in bending a hunk of wire simply to impale a fish. The answer, of course, is in the great variety of fish that are the object of the anglers rapt attention in various parts of the world. Different fish, different fishing methods, and different baits call for a variety of hooks, as well as other items of gear.

Whether to round out your angling education, review the field, or whatever, let's take a look at some fish hook lore.

Simple though it may be, there are a number of terms used to describe the fish hook. The main areas are the *eye, shank, bend, point,* and *barb.* In addition, *gap* and *throat* are terms used to describe important features of a fish hook. The illustration explains these terms.

By MORRIE NAGGIAR



In cross section, many hooks are round. To give added strength, however, those intended for heavy duty use are usually forged, that is hammered flat along the bend and sometimes along the shank as well. After they are formed from hook stock wire during the initial manufacturing process, the hooks must be tempered. As might be expected, a hook of good quality metal, properly tempered is more expensive than one of lesser quality. This is an area where the best available is a wise investment. A hook that is too brittle is likely to break at a crucial time, and one too soft can bend and pull out when a really good fish gets cranked up against it.

The position of the point in relation to the shank of the hook can vary. The most common position is straight, that is, holding the hook with the eye down and the point toward you, the point is in line with the shank. If the point is offset to the right, it is *reversed,* if it is bent toward the left, it is *kirbed.* Used mainly for bait fishing, the theory is that a kirbed or reversed hook is less likely to slip out of a fish's mouth without penetrating flesh than is a straight one. An offset hook, however, has a tendency to unbalance a live bait fish so it doesn't swim about in a free and normal fashion. For trolling or casting, an offset hook tends to spin or otherwise interfere with the intended action of your lure or bait.

Hook wire diameter is a feature to be considered in selecting fish hooks. You may find hook material referred to as *light, heavy, X-heavy, XX-heavy,* and so on. Another system uses *fine* or *stout,* combined with an X. In this method, 1X Fine is a

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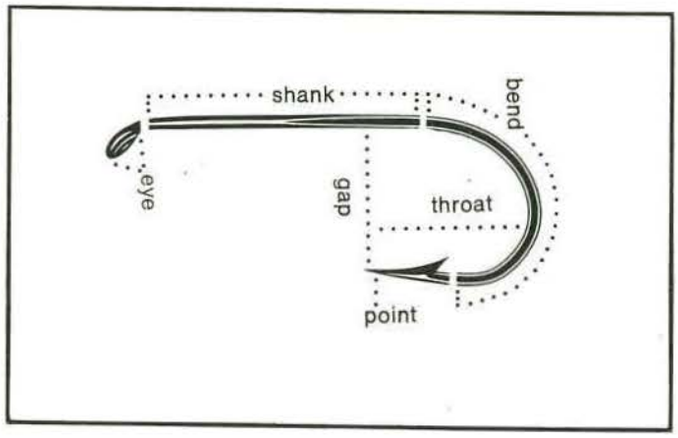


(*Continued from preceding page*)
standard diameter for a given hook size, with 2X Fine being smaller in diameter, and 3X Fine being the lightest wire that hook comes in. Under this method, a heavy hook is 1X Stout for the standard for that particular size, 2X Stout is heavier, and 4X is usually the heaviest.

In general, light wire hooks penetrate better than heavier ones but wear an enlarged hole in the tissue quickly—*buttonhole* it's sometimes called —and work loose easier than heavier wire. On the other hand, a light wire hook does not rip up fragile baits so readily. Also, a lighter hook allows a minnow or other live bait to move about more freely than does one of larger diameter.

Shank length is yet another hook characteristic

SOME HOOKS FOR FLORIDA FRESHWATER FISHING

Pattern	Name	Characteristics	Application
	Aberdeen	Sharp point, fine wire, wide gap make for good hooking characteristics.	Excellent for use with live minnows, crawfish, shrimp, other delicate baits. Suitable for catching smaller fish.
	Beak, Eagle Claw	Point is rolled in.	Excellent hooking qualities. Once fish has hook in mouth, difficult to expel it without getting hooked. Good general purpose hook.
	Big Bend, Wide Gap	Bite or gap is extremely wide.	Fish can engulf point and barb readily. Designed so point is in direct line of pull to give deep, quick penetration.
	Carlisle	Long shank.	Popular for fish that swallow baited hook, and for smaller fish with sharp teeth. Good live bait and spinner trolling hook.
	Cincinnati Bass	Long shank with offset point.	Common bass and pickerel hook.
	Limerick	Half round bend, straight point, heavy wire.	Much used for bass and catfish. Popular trotline pattern. With long shank, used for streamers and bucktails.
	O'Shaughnessy	Usually forged to give strength.	Large freshwater fish and medium saltwater species. An all-around pattern.
	Siwash, Pacific Salmon	Round bend, heavy wire, short shank, and extra long, sharp point.	Good penetration and holding power. Long point vulnerable to breaking or blunting. Good for fish that jump when hooked.
	Sproat	Nearly round bend and a straight point.	Very popular bait hook for both fresh and salt water. Also for largemouth bass jigs and for tying large wet flies.
	Sneck	Weak construction because of the two right angle bends, apt to fail under punishment of strong fighting fish.	Was more widely used in past for bass, panfish, trout.

that must be considered. This feature is expressed in X's also. The standard length for the particular size and style of long-shanked hook, for example, is 1X Long. Shank length is progressively longer through sizes 2X Long up to 6X. A designation of 1X Short is the standard for a short-shanked hook of a particular size, with the shank becoming progressively shorter in numerical progression down to 5X Short.

Long-shanked hooks are used for tying streamer flies. They are useful also in some cases where fish consistently take a hook deep, causing difficulty in retrieving the hook, and also in some instances where sharp teeth abrade the line or leader. On the other hand, a short-shanked hook is more readily concealed in a bait and offers very good penetration, other factors being equal, on soft-mouthed fishes.

The most commonly used hooks for sport fishing in fresh water have straight shanks, which may be *plain* or *sliced.* The latter features one or more barbs cut into the shank to better keep the bait on the hook. Humped-shank hooks are used for artificial lures such as popping bugs. The hump prevents the body from turning on the shank. A curved-down shank is considered by some to be a superior bait hook. The line of pull is closer to the line of point penetration, which supposedly makes hooking more certain. The central draught or gravitation hook has its shank bent upward to give a quick, raking penetration.

Hooks come in many finishes. Bronzed hooks are coated with a brownish lacquer; japanned, with black lacquer. These are reasonably satisfactory finishes for fresh water hooks, but neither holds up well in salt water. Some cheaper hooks are blued, which is not a very good fish hook finish.

Plating with silver, nickel, tin, gold, or cadmium is a common way of finishing hooks. Gold and silver plating is generally too thin to be of much value in the salt but okay for fresh water. Both cadmium and nickel plating give excellent service if properly applied, as it is on better quality hooks.

During recent years, stainless steel hooks of superior quality have been on the market. These are much improved over earlier stainless hooks, many of which were too brittle to be depended upon.

Most hooks used for Florida fresh water fishing have a simple ring or ball eye. Some hooks have an open, untempered eye that is readily closed with pliers. The purpose, supposedly, is to make changing hooks easier. Quality hooks, for the most part, have the eye closed tight against the upper shank of the hook. Watch this point carefully, as a small gap here offers a good possibility of a frayed line or leader. Hooks used for big game species usually have the gap of the eye brazed, which eliminates this particular problem.

The tapered eye has the end of the wire forming the ring smaller in diameter toward the tip, to reduce the weight of the hook, an important consideration in putting together high-riding dry flies. The loop-eye hook, usually used in making larger wet flies, tends to be somewhat oval shaped. Commonly, the wire is tapered where it touches the shank.

Eye position is another important hook detail. The ringed-eye which is aligned with the hook shank is the most common type. Both the turned-down eye, *T.D.E.* in descriptive literature, and the turned-up eye, or *T.U.E.,* have special application in artificial lures.

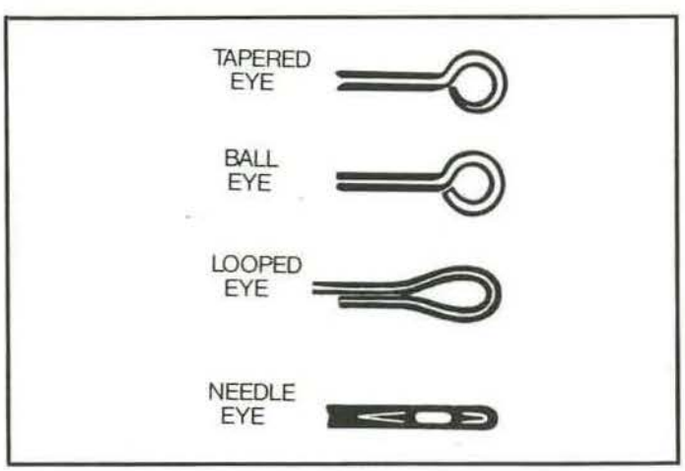
Points are an important consideration in selecting the proper hook for your purpose. The spear point is the common one on cheaper hooks. Its outline is straight from point to barb. It requires more force than the hollow point to attain good penetration, and its holding qualities are not the best.

The hollow point is ground out from point to barb. It is excellent in penetration and holds well. Usually, the hollow-point hook is sharper to start with and is easier to keep sharp.

The needle point is round in outline and tapers from point to barb. In a high quality hook, this point has superior penetrating qualities but is easily dulled.

Actual hook sizes vary with type of hook and the manufacturer. At the small end of the scale is the Mustad No. 28 fly hook. As the size number gets progressively smaller, the hook itself is larger, up to and including number 1. A 1/0 is the next larger size and so on up the scale through 2/0, 3/0, and so on. All is not quite as simple as that however. A Number 22 Superior Mustad Cincinnati bass hook, for example, is about the same size as the same brand of O'Shaughnessy #2. The answer is to know the sizes, by number, of the particular hook styles you most frequently use.

Of the great number of fish hook styles available, there is a handful that should fill the needs of most Florida fishermen. Some of the more commonly encountered patterns are included in the accompanying table. ●



To the Anti-Hunter . . .

YOU ARE A NEW PHENOMENON: New in American history and new in the evolutionary history of mankind. According to studies, you tend to be more educated, more wealthy and more urban, and to include a higher proportion of women than do hunters. You have been very successful, in an increasingly urbanized environment, in achieving your goals over the past several years. You have often inserted humanity where only demography previously ruled.

It may surprise you to hear me say that you are in danger of losing what you strive to protect. Extremism has a way of catching up to one in the fickle public arena. Flushed with success, you have often become unreasonable and oppressive, and have forgotten human social rights and ethical constraints in your rush to protect the rights of other animals. At your worst, you are blindly intent on eliminating an important aspect of human diversity, and foreclosing any future for an important and long-satisfying human experience. You would prohibit something that is culturally and genetically based, and is emotionally fulfilling to many of your fellow human beings. You would prohibit something that is ecologically sound, and that most ecosystems have evolved alongside. You would, in the special case of the North, destroy a multitude of cultures and force hundreds of thousands of human beings presently living with the natural world of renewable resources into "cash economies." The lifestyles you would force them into are incredibly profligate in their use of energy and nonrenewable resources and could ultimately result in the destruction of our last great wild lands.

Most important, by focusing your considerable energies against fellow conservationists—hunters who share your perception of man's relationship to nature—you give free rein to others who don't give a damn whether wildlife survives another day. As Dr. Raymond Dasmann put it: ". . . The nature lover who can weep over baby whales while turning a blind eye to other marine utilization schemes that would destroy the food supply of all whales, certainly lacks understanding. Those who would protect all animals from hunters, but leave them to starve on a depleted habitat, have some strange kink in their humanitarianism. Those who would eat meat, but oppose all killing of animals, live at best in a peculiarly sheltered world." By misdirecting your efforts against those who in reality share your most basic concerns, you are in danger of losing it all.

As a thoughtful conservationist, you should consider several suggestions before expending your energies to fight against all hunting: First—Learn more about ecology. Learn that the real danger to ecosystems is not limited killing of consumer species, but rather wholesale destruction of substrate and producing species and injection of pollutants. Learn the principles of compensation. Learn that once an ecosystem is altered by man (and few remain unaltered), further manipulation is often necessary to preserve it. And learn more of the "natural" lives of wild animals and the conditions they have evolved to cope with. When you understand these things, I predict that you will have a much deeper love of natural things than you have now, and will be able to relate to them more than you ever dreamed. Love based on knowledge transcends any emotional attachment based on fantasy and misinformation.

Second—Learn more of human evolution and of man's primordial relationships to natural systems. You will discover that man has long been at or near the top of the food chain, and that he has long been intertwined with many prey species as a predator. You will discover how many of man's behavioral and cultural attributes—attributes as basic as family structure—evolved because of his hunting heritage. You will learn that hunter-gatherer societies have been responsible for atrocious environmental degradations. You will learn that hunting man has always felt the greatest reverence for wild things, and has always mourned their disappearance (and strived for their protection) more than has urban man. Most important, you will discover that true hunting is not an aberration, but is an integral part of evolved mankind. The closer man returns to the natural world, the more he returns to hunting.

Third—Learn to distinguish between hunters, hooligans, and exploiters. The true hunter sincerely enjoys what he does and finds himself fulfilled and brought closer to nature by it. He could no more face a world without wildlife than he could face one without oxygen. He cherishes the intimacy and respect inherent in the hunter-hunted relationship and understands wild things better than anyone else. He is no more a bloodthirsty "kook" that you are. These things distinguish the true hunter, and he shares your disgust for those who kill and destroy thoughtlessly, wastefully or cruelly. . . .

All these suggestions boil down to this: You owe it to your fellow human beings to consider each case on its merits, to really consider all the ramifications of hunting or the abolition of hunting and to never summarily prohibit something you do not understand. Most importantly, put your efforts where they will do the most good—towards stopping the developer, the energy salesman, the polluter and their ilk. Don't squander them on your closest ally, the hunter. ●

The above article was written by Robert E. LeResche and reprinted from the September issue of the Environmental Education.

Careless Can Be Permanent

ignoring your responsibility for intelligent gun handling can cost you your hunting privileges—and maybe your life

By EDMUND McLAURIN

WHEN THE 1974-75 HUNTING SEASON OPENED, the Ocala National Forest was clean and beautiful. The roads were notably free of trash, and new, neatly-lettered road information markers had been placed by U.S. Forest Service personnel.

Sad to say, as the hunting season got into full swing, a number of the colorful road signs—representing much working time and effort by servicing crews—were disfigured by thoughtless or simply uncaring individuals who used them for target practice. Roads, especially main arteries of vehicular traffic through the Forest, were littered with cans, bottles and loose papers in almost unbroken sequence. The end of the hunting season in the Forest reflected a marked contrast to the opening date there.

As an evaluating observer, I surmise that it will take maintenance crews long weeks to rectify the situation, even if, as in past years, local area Boy Scouts volunteer their help in the colossal post-hunting season cleanup job.

The disfiguring of road markers and the littering of the sides of Forest roads need not have happened at all. It is purposeless vandalism to deface road markers with multiple bullet holes or equally disfiguring loads of buck shot, and it is so easy to bring out empty containers. A plastic bag carried in the car or hunting coat pocket would have solved the trash disposal problem.

The sad part is that those of us who were not responsible for the post-hunting season conditions in the Ocala National Forest must take public blame! It's a bit irritating, to say the least, to have the finger of blame wrongly pointed.

As example, at the end of the hunting season I stopped at the home of a resident of the Ocala National Forest to say hello and wish the family members a Happy New Year. During my visit, there were numerous mentions of hunting season activity, which prompted my host to declare, "You hunters sure left the Forest in a mess this year!"

Mind you, the finger of blame was pointed at *all* hunters—including you and me!—for the unsightly condition of Forest signs and roadsides!

Similarly, the public image of *all* hunters suffered from the acts of the relatively few unscrupulous individuals who violated state game laws and Ocala hunting area regulations. These acts included illegal killing of doe deer, hawks, and now-protected buzzards; road sign defacement; careless shooting along roads; and other wanton field actions when the perpetrators felt no wildlife officer was around to catch them.

There was critical summary of an incident where irresponsible hunters deliberately trespassed on fenced-in, posted private property, shot several doe deer, and fled the scene before a wildlife officer could be summoned—and with the hunters returning the next day to kill an orphaned fawn that had been penned for safekeeping until scheduled pickup by a wildlife officer.

As Maxwell E. Rich, executive vice president of the National Rifle Association, said, "The annual cost of damage inflicted by game violators and vandals on our wildlife resources and sports hunting may well exceed—in terms of lost game, public and private property damage, and, above all, loss of public image by the sportsman-hunter—all the gains registered by conservationists in the hunting and conservation field."

That's an awfully big price for all conscientious hunters to pay for the acts of relatively few irresponsible persons!

Wildlife officers cannot be everywhere at the same time. It is up to those of us who care. We take appropriate action leading to apprehension and conviction of game violators and vandals when we witness their acts.

Whether we want to or not, we *must* get involved if we are to keep public hunting as a sport.

DESPITE THE BEST EFFORTS of Florida's active corps of volunteer hunting safety instructors, gun editors, and general outdoor living sports educators, many hunters continue to be personally careless about carrying loaded rifles and shotguns in cars.

Time and again when hunting, I have had some fellow hunter on foot wave me down for a ride in the direction of his camp, parked car, or hunting party. Before picking him up, I always inquire if his firearm is unloaded. Often he says the firearm *is* loaded—"but it is on safety!"

That supposedly reassuring bit of information is not sufficient for me. For assured safety, I politely insist that any firearm taken into the vehicle in which I ride be *unloaded* and, further, have opened action. Sometimes disagreement ensues if the hunter

(*Continued on next page*)

To be on the safe side while climbing fences, unload your firearm, open its action and put gun on far side of fence before you climb over. Afterwards, examine the gun muzzle to be sure it is free of any dirt plug, before reloading.

(*Continued from preceding page*)

with the loaded gun insists on such necessity, because "if we should unexpectedly see a buck, I want to be ready to shoot." With me, it's either unload or pass up transportation. Personal experience supports the logic of my firm policy.

I vividly recall two particular incidents involving loaded guns carried in cars. One resulted in a fatal accident, but the other—most fortunately—caused no injuries or death.

The fatal accident occurred when a party of four young hunters piled into a Jeep, with the passenger on the front seat holding a loaded rifle, barrel slanted rearward. The rifle, according to scene-of-accident answers to questions, "was definitely on safety," its owner stoutly claimed. Examination of the position of the rifle's safety button supported his claim of non negligence.

The rifle's safety mechanism was the type that merely prevented the trigger from being pulled when safety button was in so-called "Safe" position. Inside the receiver, the trigger and connecting sear components had only tension engagement. The action's hammer was cocked and ready to strike the firing pin at the instant of separation of trigger hook and sear.

When jolting of the rough-riding Jeep ultimately brought about separation of the two working components, and with it, hammer fall on firing pin, the rifle fired. The muzzle of the high power rifle happened to be pointed at just the right angle to cause the bullet to hit one of the young passengers seated in the rear, killing him instantly. Unfortunately, this is not an unusual type of accident, what with modern hunting transportation and thoughtless field techniques.

Until he passed on, I often deer hunted with a friend who, like me, provided his own transportation and observed his own hunting hours. Although I warned him time and again about the potential danger, he insisted on carrying a loaded shotgun alongside in his truck, action cocked and gun ready to use but with safety button pushed to "On."

Years passed without mishap. Then one hunting day a wheel of his truck dipped into a deep pothole on Ocala Forest Road 88, and the resulting hard jolt caused his loaded shotgun to fire. Fortunately, the only damage was soul-shaking fright and a ragged hole in the truck's metal roof.

Also potentially serious, but of good ending, was the time another friend and I planned a duck hunting trip. At our destination, well before daylight, we each loaded hunting gear in separate skiffs.

Unknown to me, my friend had simply tossed his gear into his boat without any attempt at orderly arrangement, and had placed his shotgun, fully loaded and ready to use, somewhere in the disarray.

Fumbling in the darkness for his oars, after having shakily scrambled into his boat and pushed off from shore, he somehow caused his shotgun to discharge. The shot charge blew a sizable hole in the skiff, well below the water line. The heavily-loaded boat rapidly filled and sank in 6 feet of ice cold water before my friend could maneuver it back to shore.

Instead of duck hunting, come daylight, I spent most of the morning skin diving in the cold water, salvaging the skiff's contents and, subsequently, the water-filled boat itself. My friend, meanwhile, hugged a fire and waited for his wet clothes to dry.

On numerous later occasions we looked back on the experience with shared amusement—but the ending could have been quite different.

In a long gun that incorporates either trigger guard or tang push-button style safety, too light trigger-sear engagement can be a dangerous mechanical condition. Especially is this true where the firearm used is an autoloading shotgun. Not only can unexpected firing possibly result, but the initial firing can sometimes cause an autoloader to maxim for two or more shots that tend to blend almost together in explosive blast.

Where conditions permit, I usually make firing a gun with the safety "On" a dramatic demonstration phase of a Firearms Educational Clinic. An autoloading shotgun with a known "quick" trigger is chamber loaded with a specially concocted home handload containing only powder wads and fine steel wool (in place of shot). After ostentatious chamber loading of the gun, attention is called to deliberate activation of the shotgun's safety. I then explain, "Although I have just put the safety on this loaded shotgun, I can likely make it fire!"

Holding the shotgun well away from my body, and pointed in safe direction for all spectators, the shotgun is given deliberate hard jolt by slamming gun-butt against the ground, as might occur if the

gun were accidentally dropped. More often than not, this particular shotgun will fire despite the fact that the trigger is mechanically locked and there is no manual activation at all. The demonstration rarely fails to get across realization that a gun's safety cannot be considered 100% dependable when given "On" position placement.

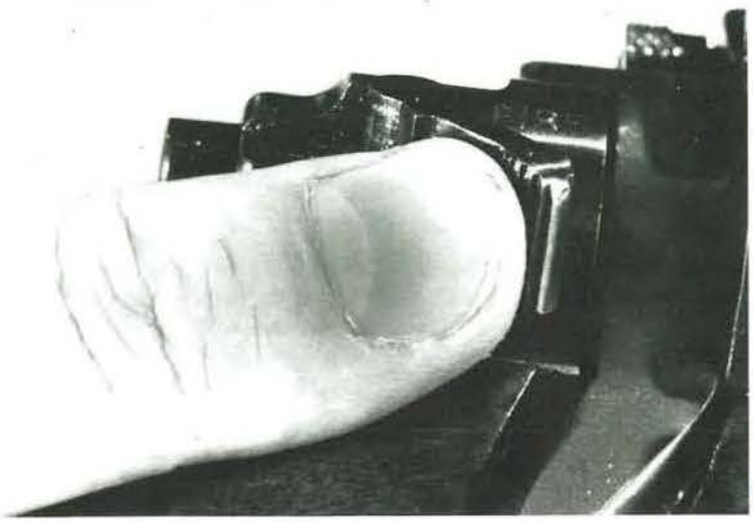
Even if your autoloader will successfully pass this performance test, there is no assurance of continued reliability. All gun mechanisms wear and collect dirt in time, and the more a firearm's mechanism is cocked and fired, more accumulative will be the wear and more critical the relation of connecting trigger and sear.

In somewhat similar dangerous fashion, a conventional side-by-side double barrel, or more modern over-and-under, will sometimes fire when the breech is snapped shut after loading, even though the tang safety is in "On" position. It has happened many times.

A wing-lever style that locks the firing pin from blow activation by cocked hammer is undoubtedly the best of various available types. The wing-lever type was incorporated into the Mauser and Springfield Model 1903 military bolt-action rifles, and is frequently seen on custom sporting rifles made on these actions.

When the wing style safety lever is manually flipped to "On" position, the rifle action's internal hammer is reliably separated and blocked against the possibility of a delivered blow to the firing pin. But even the wing type of safety is subject to failure if the shooter does not pivot the safety wing-lever to full "On" position. Setting it half way or at some other intermediate stage is risky. There is no complete blockage of hammer from firing pin contact unless the wing safety is at extreme "On" position. Shooters who own rifles with this type safety should use the safety only in full "On" and "Off" positions, never at a point somewhere between the two stages.

Thumb type safeties on certain early Remington and Winchester bolt-actions, and on Mauser and Springfield bolt-actions having similar type safety, must be used at full position. It is probable that lesser arcs don't give reliable trigger control.



As in other years, the American hunting season just closed had its own complement of gun accidents accruing from unexpected shattering of shotgun barrel or rifle action.

A common cause of these blow-ups is thoughtlessly sticking a gun muzzle under water to shoot an encountered garfish or turtle, as some inexperienced young hunters do. Another cause is unrealized plugging of a gun muzzle with dirt or mud, a likely occurrence while crawling under a barbed-wire fence or jumping a ditch.

When a rifle cartridge or shotgun shell is exploded within the confines of relatively small-diameter barrel bore, there is instantaneous gas expansion of ignited powder and progressively fast build-up of internal barrel pressure.

Pressure build-up from loads fired in a 12 gauge shotgun can easily reach 9,000 to 10,000 p.s.i. breech pressure, and as much or more than 50,000 pounds if the firearm is a high power center fire rifle, such as one of .30-06 or .270 caliber, before emergence of the bullet or shot load gives barrel pressure relief.

Any obstruction in a shotgun or rifle bore—unremoved cleaning patch, dirt or grass plug at muzzle, or even heavy grease—can possibly cause bulging, complete rupture, or partial splitting of a barrel.

A simple law of physics decrees that powder gases created on firing will follow the path of least resistance. If there is any barrel obstruction, there is momentary hesitation in forward movement of powder gas, resulting in abnormal pressure build-up and attendant barrel bulging or rupture about one and one-half inches back of the obstruction.

Before you load any firearm, first make sure it is empty, then visually check the bore (by reflecting light along its length) to make certain there is no obstruction.

Even experienced hunters sometimes forget to make such check—usually with sad result.

Two veteran hunters near Christmas, Florida, had their Jeep tip over when crossing a wide ditch. In removing the Jeep's contents in preparation for righting the vehicle, one of the hunters detected a large water moccasin alongside the overturned Jeep. He quickly grabbed his Remington Model 870 pump-action 12 gauge shotgun from the overturned Jeep, loaded it, and fired at the snake. His shotgun barrel split apart for at least 4 inches of its length! When the Jeep turned over, the shotgun's muzzle had been pushed into the soft ditch mud. The unrealized blockage caused the barrel to burst upon firing. The barrel was hopelessly ruined, but, luckily, the shooter was not injured.

In practicing firearms handling safety, you should never take anything for granted. ●

Redbreast Sunfish

By MORRIE NAGGIAR

Photo By Gene Smith

TIME AND PLACE HAVE A GREAT DEAL to do with first impressions. It's these initial contacts that set the stage for future dealings with the subject. That's the way it was with the redbreast.

It was back nearly a quarter century ago. To young eyes tuned to a different section of the country, those early days in Florida were a succession of new and exciting scenes and experiences. This particular early spring morning was no exception. After a chill night, the rising sun made short work of the ground fog that hung in ragged patches over the broad, placid surface of the St. Johns. The aroma of budding and flowering plants in the warming, rich humus of the river swamp floated on the still air.

Roy turned the bow of the little skiff into the clear, fast-flowing channel of the Oklawaha. The hum of the little 3-horse stopped as he cut the throttle at the head of a long quiet stretch of deep water.

The small cork float drifted with the placid current, eddied for a moment above a water-soaked snag, and started past. There was no tentative quiver; one moment the cork was there, the next it had disappeared under the surface. I lifted the pole to take up the slack. A sharp tug on the line was followed by a spirited sprint that bowed the light cane. When I lifted him up out of the dark water, it was like pulling a gleaming jewel from the depths. The brilliant reddish-yellow belly contrasted with the light olive body, with its indistinct, somewhat darker barred pattern. There were blue tracings on the sides of the head, and long, leathery, blackish-hued gill flaps, or "ears."

Many a string of redbreast and other "bream" has been boated since that far-off morning, but the impression of that first living gem of a fish is still vivid. Beauty, spirit, and the attractiveness of its chosen habitat make the elegant little redbreast a favorite among Florida bream fishermen.

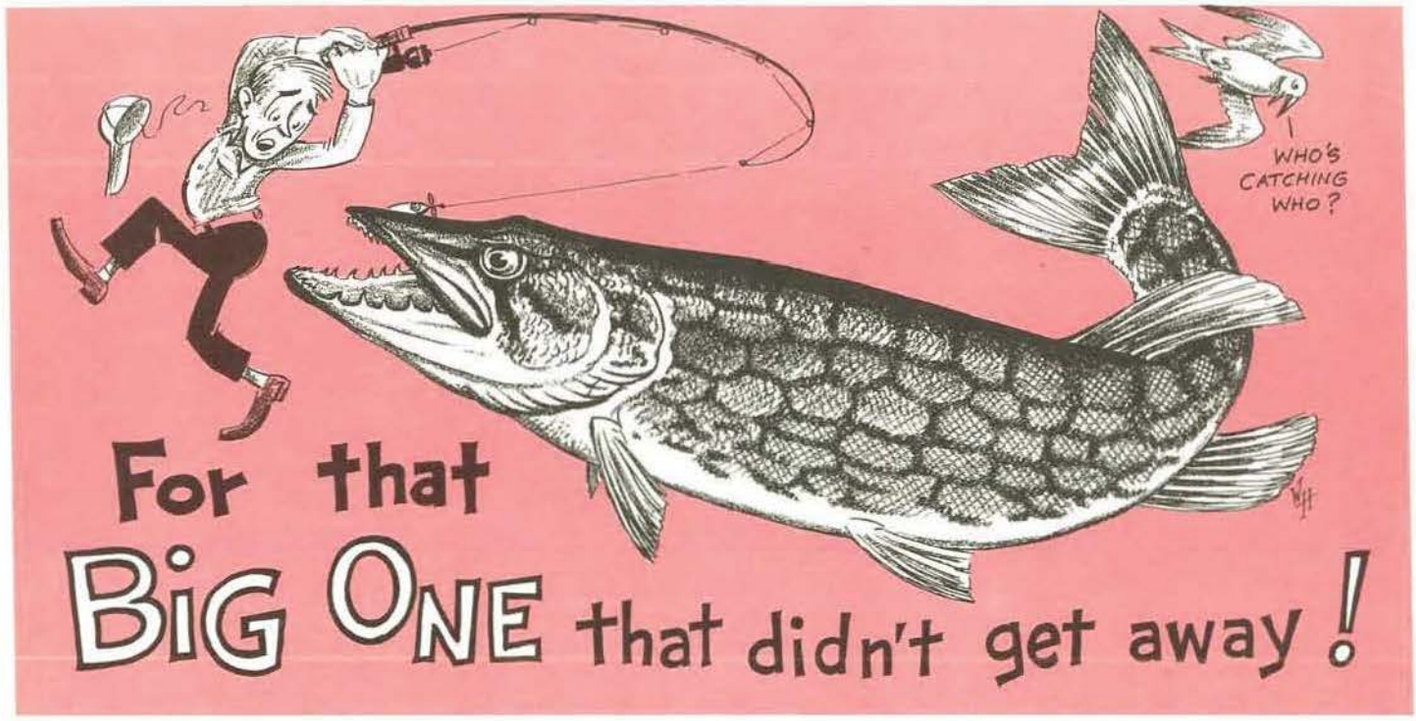
As might be suspected from its general appearance, the redbreast is a member of Florida's first family of freshwater game species, the *Centrarchidae*, or spiny-rayed fishes. This is the group that includes such illustrious members as the largemouth bass, the bluegill, the redear, or shellcracker, and the like. In common with them, the redbelly, as the redbreast is commonly called, is a willing taker of a variety of baits and lures, and is a hard scrapper for its size. An 8-inch, 1-pound redbreast is a good one. The average of most catches of this species would probably be somewhere around 5½ inches. Anything it lacks in size is made up for by its excellent table qualities.

The redbreast is essentially a fish of fairly fast-flowing streams. By no means confined to Florida, the species is known from Maine southwesterly to Texas. Here at home, its range extends southward at least into central Florida, wherever there is a stream with sufficient current to meet the redbelly's requirements.

The spawning habits are typical of the other spiny-rayed fishes. A common site for the cup-shaped depression in which the eggs are deposited, is in moving water just off the edge of a strong current. Some spawning takes place in most of the warmer months, but May is usually the peak in central Florida and possibly somewhat later in northwest Florida streams.

After the female has deposited her eggs, the male assumes guard duty, keeping a protective eye on the developing eggs and the young fish during the first few critical days after hatching.

Although they may be taken on such artificials as wet flies and small baited spinners, probably most redbelly fishermen depend on the earthworm to entice a catch of these highly regarded fish panward. ●



ELIGIBILITY REQUIREMENTS
SPECIES

LARGEMOUTH BASS
.....8 pounds or larger

STRIPED BASS
.....10 pounds or larger

CHAIN PICKEREL
.....4 pounds or larger

BLUEGILL (BREAM)
.....1½ pounds or larger

SHELLCRACKER
.....2 pounds or larger

BLACK CRAPPIE
.....2 pounds or larger

REDBREAST
.....1 pound or larger

TO BE ELIGIBLE . . .

all fish must have been taken from the fresh waters of the State of Florida, on conventional tackle, with live or artificial bait, in the presence of at least one witness. The catch must have been weighed and recorded at a fishing camp, tackle shop, or similar establishment, by the owner, manager, or an authorized employee. No citation will be issued for a record-sized catch unless fish was preserved for examination.

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is available without charge to subscribers to FLORIDA WILDLIFE Magazine and their immediate families who catch any of the listed freshwater fish of the prescribed minimum size. A citation for framing will be mailed to the applicant upon receipt of the following application form properly filled out and signed. Only those applications received within 90 days of the date of catch will be honored.

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The Editor, FLORIDA WILDLIFE Date_____
Game & Fresh Water Fish Commission, Tallahassee, Fla. 32304

Please send me the Florida Wildlife Fishing Citation with the inscribed data listed below:

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Species_____ Weight_____ Length_____

Type of Tackle_____

Bait or Lure Used_____

Where Caught_____ in_____ County

Date Caught_____ Catch Witnessed By_____

Registered, Weighed By_____ At_____

Signature of Applicant_____

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Otter

Photo By Leonard Lee Rue III

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